CLAIMS

1. A method of testing telecommunications systems which include both circuit switching and packet switching components comprising the steps of:

   (A) a circuit switching component initiating a loopback test that encompasses communications path through a packet switching component;

   (B) the packet switching component returning a looped back test message to the circuit switching component; and

   (C) the circuit switching component responding to the reception of the returned test message by determining that the path encompassed by the packet switching component is operational.

2. The method of claim 1 further comprising the step of:

   (D) the circuit switching component responding to absence of a returned test message from the packet switching component by determining that the path encompassed by the packet switching component is not operational, or provisioning data is not consistent with the hardware connection.

3. A method of testing telecommunications systems that include both circuit switching and packet switching components, and an interworking facility between the circuit switching and packet switching components, the interworking facility including an Internet Protocol Device Control (IPDC) and an asynchronous transfer mode Switched Virtual Circuit Capability, comprising the steps of:

   (A) a circuit switching device employing an Asynchronous Transfer Mode (ATM) address to establish a loopback path;

   (B) an interworking facility establishing an ATM Switched Virtual Circuit with the ATM address via an ATM virtual connection using the ATM address;

   (C) establishing the ATM address as a loopback point; and

   (D) performing a loopback test through the loopback point established in step (C).

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4. A method of testing telecommunications systems that include both circuit switching and packet switching components, and at least one interworking facility connecting packet switching and circuit switching components, the interworking facility being an Internet Protocol (IP) device, the method comprising the steps of:

(A) a circuit switching device sending a packet to an interworking facility, the packet identifying a specific packet switching point at which a loopback is to be effected,

(B) the interworking facility routing the packet to a pre-established loopback path through the packet switching component; and

(C) the interworking facility returning the circuit switched data to the circuit switching device.

5. The method of claim 4 wherein step (A) comprises:

(A1) the circuit switching component device sending an Internet protocol packet in which an egress port for a looparound is included, the looparound point being determined by an incoming facility and a channel number included within the packet.

6. The method of claim 5 further comprising the step of:

(D) the interworking facility setting an entry in its routing table with the facility address and channel numbers as a looparound address.

7. The method of claim 6 wherein the interworking facility's routing table entry is an internal entry.

8. The method of claim 7 wherein the interworking facility removes the routing table entry after at timeout.

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9. The method of claim 8 wherein the interworking facility swaps source and destination addresses in the Internet protocol packet it receives from the circuit switching component in step (A1).

10. The method of claim 9 wherein the interworking facility enters an echo response to in a packet it returns to the circuit switching side if the looparound the circuit switching component operates.

11. A telecommunications system comprising:

a circuit switching component for initiating a loopback test that encompasses a communications path through a packet switching component; and

a packet switching component responsive to the reception of a test message from a circuit switched component by returning the test message to the circuit switching component, the circuit switching component responsive to the reception of the returned test message by determining that the path encompassed by the packet switching component is operational.

12. A telecommunications system comprising:

a circuit switching component;

a packet switching component; and an interworking facility connecting the packet switching and circuit switching components, the interworking facility being an Internet Protocol (IP) device, the circuit switching device being configured to send a packet to the interworking facility, the packet identifying a specific packet switching point at which a loopback is to be effected, the interworking facility being responsive to the reception of such a packet by routing the packet to a pre-established loopback path through the packet switching component.

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13. The telecommunications system of claim 12 wherein the interworking facility is responsive to the reception of the packet from the packet switching component by returning the packet to the circuit switching component.

14. A method of testing telecommunications systems that include both circuit switching and packet switching components, and an interworking facility between the circuit switching and packet switching components, the interworking facility including an Internet Protocol Device Control (IPDC) and an asynchronous transfer mode Switched Virtual Circuit Capability, comprising the steps of:

(A) a circuit switching device using IPDC to communicate with the interworking facility to set up a loopback path to a designated ATM loopback point identified by an E.164 ATM address;

(B) performing a loopback test employing the loopback path established in step (A).

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